

### 37. NEW PLANT RECORDS FOR INDIA FROM KASHMIR—II

(With two text-figures)

Based upon the occasional collections made during 1968-1973 throughout the Kashmir valley, I reported *Phacelia tanacetifolia* Benth. and *Sideritis montana* Linn. as two new records for India (See *J. Bombay nat Hist. Soc.* 69:229, 1972). This paper adds two new composites for India namely: (1) *Aster pilosus* Willd. var. *demotus* Blake recorded as "escape from cultivation, chakrah 7000 ft on 29-ix-1936" on a specimen deposited at KEW and (2) *Chrysanthemum parthenium* (Linn.) Bernh. of which one specimen collected by Falconer (1864) from Kashmir is deposited at Kew.

The fresh specimens of these plants have been deposited at Royal Botanical Gardens, Kew, and Blatter Herbarium, Bombay.

**Aster pilosus** Willd. var. **demotus** Blake in *Rhodora* 32:139, 1930.

*A. ericoides* Auct. (non Linn. Sp. pl. 875, 1753). [Fig. 1].

Annual herbs: Stem suberect to decumbent, upto 75 cm branched, leafy, slightly angled towards the base, downy greyish or tomentose towards the apices. Leaves simple, linear, filiform, upto 3.7 cm long, tips acute; crowded towards the apices; alternate, light green, somewhat downy or tomentose. Flower heads white with purplish tinge, generally solitary on a short leafy branch, paniced. Involucral bracts 2-3 seriate; outer ones a bit smaller up to 5 mm long; inner ones up to 7 mm long, obovate to linear, margins membranous, slightly downy and persistent. Flowers heterogamous; ray florets 2-4 seriate, ligule up to 1 cm, entire or bifid near the apex, female, fertile, style half as long as the ligule with 2 small diverging arms near the apex; disc florets purplish, *alpha*-seriate, corolla tube 4-5 fid, stamens 5, anthers with obtuse bases coming out of the tube at maturity, style similar to that of ray florets. Receptacle small, simple and naked. Achenes elongated upto 1 mm, whitish, tapering towards the base, finely hirsute; pappus white, almost 3 times the length of achenes.

*Distribution*: A native of America and introduced into Kashmir.

*Specimens examined*: Kaul RRL 19727 (21-x-1970) Badgam Orchards, Rare. Kaul RRL 19801 (31-x-1970) Gulmarg Forests.

**Chrysanthemum parthenium** (Linn.) Bernh. Syst. Verz. Erf. 145, 1800; Aitch. in *J. Linn. Soc.* 18 : 69, 1880; Kitamura in *Fl. Afghanistan* 402, 1960; Polunin in *Fls. Europe* 443, 1969. *Pyrethrum parthenium* (Linn.) Smith in *Fl. Britannica* 2 : 900, 1800. [Fig. 2].

Perennial branched herbs with a somewhat creeping root stock. Stem woody below erect up to 60 cm, branched, light green, ribbed, finely tomentose towards the apex. Leaves pinnate up to 8 cm long,

with 3-7 oval leaflets, each further divided into narrow, oval, toothed or lobed segments, strongly aromatic; lower cauline leaves stalked, stalk slender, as long or shorter than the leaf; upper ones pinnatifid to pinnatisect, sessile to subsessile, glabrous or minutely pubescent. Flower heads long, stalked, forming subcorymbose compound heads. Involucral bracts ovate, 1-2 seriate, downy with membranous margins. Ray florets



FIG. 1. *Aster pilosus* Willd. var. *demotus* Blake (A flowering shoot). a. an involucral bract; b. a disc floret; c. a ray floret; d. an achene.

in a single outer row, ligules white, 3-5 fid, female, fertile or even sterile. Disc florets many, yellowish, compact in the centre; corolla tube 3-5 fid, stamens with linear anthers, style truncate. Achenes whitish, somewhat cuneate, tapering towards the base, glabrous or minutely hispidulous. Receptacle naked.



FIG. 2. *Chrysanthemum parthenium* (Linn.) Bernh. (A flowering shoot). a. an involucre bract; b. a ligule; c. a disc floret; d. an achene.

DISTRIBUTION: Europe, Transcaucasia, Caucasus, Asia minor, Afghanistan.

*Specimens examined*: Kaul RRL 19706 (15-x-1970) Majid Bagh, Srinagar.

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#### 38. SOME INTERESTING PLANTS FROM RAJASTHAN

A perusal of up-to-date literature on the vegetation of Rajasthan reveals that north-east, north-west, and western parts of the state have been intensively explored so far. South-eastern plateau of Rajasthan, which extends over Kotah, Bundi and Jhalawarh districts, has not been given due consideration; the notable contributions from this plateau are those of Jain & Kotwal (1960), Gupta (1965, 1966), Singh (1970) and Maheshwari & Singh (1972).

During botanical exploration of south-eastern plateau of Rajasthan, I noted that about 21 species, belonging to 19 genera and 9 families, have not been recorded earlier from any locality in Rajasthan. These species are enumerated below and each specific name is accompanied by its field number, frequency and abundance in the area, habitat with exact locality of occurrence and flowering and fruiting times. In the present paper 17 new records for "The Flora of Upper Gangetic Plain" have also been mentioned for the first time from this area and few species have been reported for the second time from Rajasthan. Earlier these species have been known from Mt. Abu, the highest peak of Aravallis.

The herbarium specimens are deposited in the Herbarium of National Botanic Gardens, Lucknow (LWG).

#### POLYGALACEAE

***Polygala erioptera* DC. var. *vahliana* (DC.) Chodat (90504).** Rare; occurs in dry, rocky wastelands near Kotah. This variety differs